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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------------|-------------|----------------------|---------------------|------------------|
| 10/539,089 | 12/14/2005 | Tomi Veikonheimo | 034382-004 | 9066 |
| 21839 | 7590 | 07/19/2007 | EXAMINER | |
| BUCHANAN, INGERSOLL & ROONEY PC | | | VENNE, DANIEL V | |
| POST OFFICE BOX 1404 | | | ART UNIT | PAPER NUMBER |
| ALEXANDRIA, VA 22313-1404 | | | 3617 | |
| MAIL DATE | | DELIVERY MODE | | |
| 07/19/2007 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/539,089 | VEIKONHEIMO ET AL. | |
| | Examiner | Art Unit | |
| | Daniel V. Venne | 3617 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 19 June 2007.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-14 is/are rejected.
 7) Claim(s) 1,4-8,11 and 13 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 15 June 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1.) Certified copies of the priority documents have been received.
 2.) Certified copies of the priority documents have been received in Application No. _____.
 3.) Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>6/19/2007</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification describes "flow plates" which are features indicative of the propeller caps; however, the amended claims recite "flow blades" which is inconsistent with the terminology used throughout the specification.

Claim Objections

2. Claims 1, 4-8, 11 and 13 are objected to because of the following informalities:
Claims 1, 4-8, 11 and 13 recite the terms "flow blades" or "blades" for the feature described in the specification as "flow plates" or "plates".
Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varis (WO 0154971 A1), in view of Parsons (NO 10907). Varis teaches all of the claimed features, with the exception of at least two equally distributed flow plates arranged on the cap of the forward propeller radially projecting from the cap. Parsons teaches a propeller hub (boss) cap (cone) (Figs. 3-4) comprising a plurality of equally

spaced flow plates (blades or vanes) [v] projecting from the cap in a radial direction with no inclination and without extending beyond the diameter of the cap for reducing cavitation and enhancing flow characteristics. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify to provide a propeller cap with flow plates as taught by Parsons for the forward propeller hub of Varis to create the invention as claimed by applicant. The motivation would have been to reduce or minimize cavitation effects.

5. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varis (WO 0154971 A1), in view of Parsons (GB 9792) (which is disclosed by applicant on IDS received 6/19/2007 and is essentially the same as Parsons (NO 10907). Varis teaches all of the claimed features, with the exception of at least two equally distributed flow plates arranged on the cap of the forward propeller radially projecting from the cap. Parsons teaches a propeller hub (boss) cap (cone) (Figs. 3-4) comprising a plurality of equally spaced flow plates (blades or vanes) [v] projecting from the cap in a radial direction with no inclination and without extending beyond the diameter of the cap for reducing cavitation and enhancing flow characteristics. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains to modify to provide a propeller cap with flow plates as taught by Parsons for the forward propeller hub of Varis to create the invention as claimed by applicant. The motivation would have been to reduce or minimize cavitation.

Response to Arguments

6. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reuter et al. (US 2004/0147182 A1) discloses a thruster with forward propeller [3] and aft propeller [4] and hubcaps [14, 15].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel V. Venne whose telephone number is (571) 272-7947. The examiner can normally be reached between 7:30AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Samuel J. Morano can be reached on (571) 272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DV
16 July 2007

LARS A. OLSON
PRIMARY EXAMINER

Lars Olson
7/17/07